

## WHAT IS CLAIMED IS:

1. A portable computer, comprising:
  - a portable computer unit having a configuration that allows a system mode to be switched between a notebook computer mode and a tablet computer mode; and
  - a controller configured to determine the configuration of the portable computer unit responsive to a system power supply of the portable computer being turned on, wherein the controller operates an application program for the tablet computer mode or the notebook computer mode according to the determination.
2. The portable computer of claim 1, wherein the controller selectively enables a different corresponding operating system for the tablet computer or the notebook computer.
3. The portable computer of claim 1, wherein the portable computer unit is a display module whose rotation state allows the system mode to be switched between the notebook computer mode or the tablet computer mode.
4. The portable computer of claim 3, comprising a detector coupled to the controller and configured to detect the rotation state of the display module, wherein the detector comprises:
  - a magnetic sensor or a rotation detection switch based upon a mechanical contact; and

a first controller configured to detect an ON/OFF state of the magnetic sensor or rotation detection switch.

5. The portable computer of claim 4, wherein the first controller is one of a keyboard controller, a south bridge and an input/output (I/O) controller.

6. The portable computer of claim 1, wherein the controller is a basic input/output system (BIOS).

7. The portable computer of claim 6, wherein the controller selects and boots an operating system (OS) for a tablet computer when the detected rotation state of the display module corresponds to the tablet computer mode.

8. The portable computer of claim 6, wherein the controller selects and boots an OS for a notebook computer when the detected rotation state of the display module corresponds to the notebook computer mode.

9. The portable computer of claim 1, wherein the controller determines a physical configuration of the portable computer unit.

10. An apparatus for booting a system in a portable computer including a display module whose rotation state allows a system mode to be switched to a notebook computer mode or a tablet computer mode, comprising:

detection means for detecting the rotation state of the display module when a system power supply provided in the portable computer is turned on; and

control means for selectively booting an operating system (OS) for a tablet computer or a notebook computer according to a result of the detection.

11. The apparatus of claim 10, wherein the detection means comprises:

a magnetic sensor or a rotation detection switch based upon a mechanical contact; and

a controller for detecting a status of the magnetic sensor or the rotation detection switch.

12. The apparatus of claim 11, wherein the controller is one of a keyboard controller, a south bridge and an input/output (I/O) controller.

13. The apparatus of claim 10, wherein the control means is a basic input/output system (BIOS).

14. The apparatus of claim 13, wherein the control means selects and boots the OS for the tablet computer when the detected rotation state of the display module corresponds to the tablet computer mode.

15. The apparatus of claim 13, wherein the control means selects and boots the OS for the notebook computer when the detected rotation state of the display module corresponds to the notebook computer mode.

16. A method for booting a system in a portable computer, comprising:  
detecting one of a notebook computer configuration and a tablet computer configuration when a system power supply provided in the portable computer is turned on;  
and  
selectively booting an initialization application program for a tablet computer or a notebook computer according to said detecting.

17. The method of claim 16, wherein the detecting comprises detecting a rotation state of a display module.

18. The method of claim 16, wherein the rotation state of the display module is detected by a magnetic sensor or a rotation detection switch based upon a mechanical contact.

19. The method of claim 17, wherein selectively booting comprises:  
selecting and booting an operation system for a tablet computer when the detected rotation state of the display module corresponds to the tablet computer mode.

20. The method of claim 17, wherein the selectively booting comprises:  
selecting and booting an operating system for a notebook computer when the detected rotation state of the display module corresponds to the notebook computer mode.

21. An article including a machine-readable storage medium containing instructions for booting a system in a portable computer including a display module whose rotation state allows a system mode to be switched to a notebook computer mode or a tablet computer mode, the instructions, when executed, causing the portable computer to:  
detect the rotation state of the display module when a system power supply provided in the portable computer is enabled; and  
selectively boot an operating system (OS) for a tablet computer or a notebook computer according to the detection.

22. The article of claim 21, wherein the storage medium contains instructions for causing the portable computer to select and boot the OS for the tablet computer, when the detected rotation state of the display module corresponds to the tablet computer mode.

23. The article of claim 21, wherein the storage medium contains instructions for causing the portable computer to select and boot the OS for the notebook computer, when the detected rotation state of the display module corresponds to the notebook computer mode.

24. A portable computer, comprising:  
a portable computer device whose configuration allows a system mode to be switched to a notebook computer mode or a tablet computer mode;  
at least one input unit;  
a monitor configured to monitor a system mode switching operation; and  
a controller coupled to the monitor and configured to control an operating state of the input unit to be inactive according to a current system mode.

25. The portable computer of claim 24, wherein the input unit comprises a touch screen digitizer, a keyboard and selectively comprises at least one of a stick pointer and a touch pad.

26. The portable computer of claim 25, wherein the control means controls the keyboard and said at least one of the stick pointer and the touch pad to be active, and controls the touch screen digitizer to be inactive, when the current system mode is the notebook computer mode.

27. The portable computer of claim 21, wherein the control means controls the keyboard and said at least one of the stick pointer and the touch pad to be inactive, and controls the touch screen digitizer to be active when the current system mode is the tablet computer mode.

28. The portable computer of claim 20, wherein when the input unit is inactive, power supplied to the input unit is in an OFF state.

29. An apparatus for protecting at least one input unit in a portable computer including a first input unit including a touch screen digitizer and a second input unit selectively including at least one of a keyboard, a stick pointer and a touch pad, and a portable computer device whose configuration state is configured to switch a system mode to a notebook computer mode or a tablet computer mode, comprising:

monitoring means for monitoring a system mode switching operation; and

control means for controlling an operating state of the input units to be an inactivation state according to a current system mode.

30. The apparatus of claim 29, wherein the portable computer device is a display module whose rotation state switches the current system mode between the notebook computer mode and the tablet computer mode.

31. The apparatus of claim 29, wherein the control means controls the second input unit to be in the activation state and controls the first input unit to be in the inactivation state, when the current system mode is the notebook computer mode.

32. The apparatus of claim 29, wherein the control means controls the second input unit to be in the inactivation state and controls the first input unit to be in the activation state when the current system mode is the tablet computer mode.

33. The apparatus of claim 25, wherein the inactivation state is a state where power is not supplied to the input unit.

34. A method for protecting at least one input unit in a portable computer including a display module whose rotation state allows a system mode to be switched between a notebook computer mode and a tablet computer mode, comprising:

monitoring a system mode switching operation; and

controlling an operating state of the input unit to be each of an active state and an inactive state according to a current system mode.

35. The method of claim 34, wherein the input unit comprises a touch screen digitizer, and selectively comprises at least one of a keyboard, a stick pointer and a touch pad.



36. The method of claim 35, wherein said controlling comprises controlling the keyboard, the stick pointer or the touch pad to be in the activate state, and controlling the touch screen digitizer to be in the inactive state when the current system mode is the notebook computer mode.

37. The method of claim 35, wherein said controlling comprises controlling the keyboard, the stick pointer or the touch pad to be in the inactive state, and controlling the touch screen digitizer to be in the active state when a current system mode is the tablet computer mode.

38. The method of claim 29, wherein power is not supplied to the input unit in the inactive state.

39. An article including a machine-readable storage medium containing instructions for protecting first input unit including a touch screen digitizer, and a second input unit selectively including at least one of a keyboard, a stick pointer and a touch pad in a portable computer including a display module whose rotation state allows a system mode to be switched between a notebook computer mode and a tablet computer mode, the instructions, when executed, causing the portable computer to:

monitor a system mode switching operation; and

control an operating state of at least one input unit to be each of an activation state and inactivation state according to a current system mode.

40. The article of claim 39, wherein the storage medium contains instructions for causing the portable computer to control second input unit to be in the activation state, and control the first input unit to be in the inactivation state when the current system mode is the notebook computer mode.

41. The article of claim 39, wherein the storage medium contains instructions for causing the portable computer to control the second input unit to be in the inactivation state, and control the touch screen digitizer to be in the activation state, when the current system mode is the tablet computer mode.

42. The article of claim 34, wherein the inactivation state is a state in which power supplied to the input unit is in an OFF state.

43. A portable computer, comprising:  
a display module whose rotation state allows a system mode to be switched to a notebook computer mode or a tablet computer mode;  
a first switch configured to sense opening and closing operations of the display module;  
a second switch configured to sense a rotation operation of the display module;

a logic device configured to output an open/close signal of the display module based on a signal of the first switch; and

a logic device controller configured to control the logic device to be in an enable/disable state based on a signal of the second switch.

44. The portable computer of claim 43, wherein the logic device controller comprises:

a transistor for controlling a signal to be inputted into a gate terminal of the logic device based upon the operation of the second switch.

45. The portable computer of claim 43, wherein the logic device is disabled when the system mode is switched to the tablet computer mode by the rotation operation of the display module and the second switch is enabled.

46. The portable computer of claim 43, wherein the logic device is enabled when the second switch is disabled.

47. A protection circuit provided in a portable computer including a display module whose rotation state allows a system mode to be switched to a notebook computer mode or a tablet computer mode, a first switch for sensing opening and closing operations of the display module, and a second switch for sensing a rotation operation of the display module, comprising:

a logic device configured to output an open/close signal of the display module based upon an operation of the first switch; and

a logic device controller configured to control the logic device to be in an enable/disable state based upon an operation of the second switch.

48. A portable computer, comprising:

a controller configured to set a system performance operation based upon the portable computer operating in each of a notebook computer mode or a tablet computer mode; and

a memory configured to store at least one control value necessary for setting the system performance operation in said each mode.

49. The portable computer of claim 48, wherein the system performance operation comprises at least one of a central processing unit (CPU) speed, a system temperature and a fan speed.

50. The portable computer of claim 48, wherein the system mode is switched by a user's selection, and information of the switched system mode is stored in a setup menu.

51. An apparatus for managing a system mode in a portable computer including a notebook computer mode or a tablet computer mode, comprising:

monitoring means for monitoring a system mode switching operation; and  
setting means for setting different system power consumption  
environments based upon a current system mode.

52. The apparatus of claim 51, comprising storing means for storing at least one control value necessary for setting each of said system power consumption environments based upon the current system mode, wherein the system mode is switched by a user's selection, and information of the switched system mode is stored in a complementary metal oxide semiconductor (CMOS) setup menu.

53. A method, comprising:  
operating a portable computer in a notebook computer mode and a tablet computer mode, wherein devices in the portable computer operate in each mode; and  
operating at least one device in the portable computer at a first power consumption level in the notebook computer mode and a second lower power consumption level in the tablet computer mode.

54. A method for managing a system mode in a portable computer having a configuration that switches a system mode to a notebook computer mode or a tablet computer mode, comprising:  
monitoring a system mode switching operation;

setting at least one control value necessary for switching a system performance based upon the switched system mode.

55. The method of claim 54, wherein the system performance comprises at least one of a central processing unit (CPU) speed, a system temperature, display brightness control and a fan speed.

56. The method of claim 54, wherein said setting comprises:

- storing information of the switched system mode in a setup menu when the system mode is switched; and
- reading, from a memory, the control value necessary for setting the system environment based upon the switched system mode from the setup menu.

57. An article including a machine-readable storage medium containing instructions for managing a system mode in a portable computer including a display module whose rotation state allows the system mode to be switched to a notebook computer mode or a tablet computer mode, the instructions, when executed, causing the portable computer to:

- monitor a system mode switching operation;
- read, from a memory, at least one control value necessary for setting a system environment based upon the switched system mode when the system mode is switched; and

set the system environment based upon the read control value.

58. The article of claim 57, wherein the storage medium contains instructions for causing the portable computer to:

store information of the switched system mode in a setup menu when the system mode is switched, wherein the system environment comprises at least one of a central processing unit (CPU) speed, a system temperature, display brightness control and a fan speed.